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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,912	05/14/2002	Michael O'Connor	42390.P3674R	1765
8791	7590	05/04/2004	EXAMINER VORTMAN, ANATOLY	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD, SEVENTH FLOOR LOS ANGELES, CA 90025			ART UNIT 2835	PAPER NUMBER

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,912

Applicant(s)

O'CONNOR ET AL.

Examiner

Anatoly Vortman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2004 (RCE and Amendment).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32,35-42,45-48 and 52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32,35-42,45-48 and 52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application on 04-09-04 after final rejection (12-05-03). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04-09-04 has been entered. Claims 33, 34, 43, 44 and 49-51 have been cancelled. Claims 1-32, 35-42, 45-48 and 52 remain active.

Oath/Declaration

2. Oath/Declaration is defective and therefore objected to. The statement regarding “deceptive intent” is incomplete (see paragraph 3 below) . Also, alleged errors in the issued patent have not been addressed by identifying a single phrase, word, expression/etc., in the written description or claims and how such renders the patent invalid (see MPEP 1414).

Claim Rejections - 35 USC § 251

3. The first action paragraph 2 defective oath/declaration is believed proper and is repeated herein. Applicant's arguments on this point are not convincing. Applicant

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argues that the original application failed to claim certain embodiments. How is this an error? It appears that a divisional case should have been filed. This is not an error for a reissue case.

Also, MPEP 1414 states that identifying a single phrase, word, expression/etc., in the written description or claims and how such renders it invalid must be done. Such is not the case herein.

Also, in the oath/declaration it should be stated that all errors arose without deceptive intent since multiple errors are alleged. The current language refers to an error.

Claims 1-32,35-42,45-48 and 52 are rejected for the same reasons given in paragraph 3 of the first action (based on a defective oath as explained above).

4. Claims 28-32,35-42,45-48 and 52 are rejected under 35 USC 251 as being an improper recapture as explained in paragraph 4 of the first action. Applicant's amendments to the claims replaced limitation "a fan" with "an air flow generator", which is broader than the original limitation and therefore is not sufficient to overcome the rejection of the claims as being an improper recapture.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 30 and 39-42, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Regarding claim 30, the claim recites: "first and second internal surfaces". The limitations had never been positively set forth in the parent claim 28, and therefore lacking proper antecedent basis.

Regarding claims 39-42, the claims drafted as an apparatus claims, but dependent on method claim 36.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-7, 9-14, 16-26, 28-32, 35-42, 45-48, and 52, are rejected under 35 U.S.C. 103(a) as being unpatentable over US/5,583,316 to Kitahara et al., (Kitahara).

Regarding claims 1,2, 5-7, 9,10, 12-14, 16-18, 20, 24-26, 28, 35, 37, 45, 21,29, 30, 46-48, and, as best understood regarding claims 38, 41, and 42, Kitahara disclosed (Fig. 72, 73) an apparatus comprising: an air duct (3) comprising a housing made of thermally conductive material (aluminum, column 2, line 28) and (2, 91-94) having internal fins along an internal surface (can be clearly seen on member (2)), said air duct dividing and directing divided air flow from an inlet port (92) to a first and a second exit port (98), and an air flow generator (a fan)

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coupled to said inlet port (92) to produce the air flow, said duct coupled directly to a heat generating component (1) (an integrated circuit), **but** did not disclose a heat transfer means (a heat pipe).

On Fig. 50A, Kitahara teaches another embodiment of the apparatus comprising a heat transfer means (a heat pipe) (55) having an evaporator portion coupled to the heat generating component (1) and a condenser portion coupled to the air duct (2-4).

It would have been obvious to person of ordinary skill in the cooling art at the time the invention was made to supplement embodiment of Fig. 72 and 73 with the heat pipe of embodiment of Fig. 50A in order to adapt the embodiment of Fig. 72 and 73 for the situation when mounting directly on the heat generating component is not possible.

Regarding claims 19, 36 and 52, the method steps recited in the claims are inherently necessitated by the device structure as disclosed by Kitahara.

Regarding claims 3, 22 and, as best understood regarding claim 39, Kitahara disclosed (Fig. 73) that the housing includes a first plate (2) and a second plate (91) having respective first and second internal surfaces, the first internal surface having a first array of protruding members that constitute internal fins (fins are clearly seen on Fig. 73).

Regarding claims 4, 11, 23 and, as best understood regarding claim 40, Kitahara disclosed (Fig. 47 A, B) first and second plates (65, 66) having protruding fins on the respective internal surfaces.

9. Claims 8, 15, and 27, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitahara in view of US/4,923,000 to Nelson.

Kitahara disclosed all, but resonate cantilever vibrator.

Nelson disclosed (Fig. 1) a resonate cantilever vibrator employed as a cooling fluid flow generator for a cooling fluid.

Since inventions of Kitahara and of Nelson are from the same field of endeavor (cooling), the purpose of the cantilever vibrator disclosed by Nelson would be recognized in the invention of Kitahara.

It would have been obvious to a person of ordinary skill in the cooling art at the time the invention was made to substitute conventional cooling fan of Kitahara with cantilever vibrator of Nelson in order to simplify the device and to enhance the heat transfer characteristics (see Nelson, column 1, lines 1+).

Response to Arguments

10. Applicant's arguments regarding 35 USC § 251 rejection have been addressed in the body of the rejection above.

Applicant's arguments regarding the rejection on the merits are moot in view of the new grounds of rejection. However, the Examiner would like to direct the Applicant's attention to the fact that reference of Nelson (US/5,339,214) applied in the rejection in the previous Office Action would have been also sufficient to reject under 35 USC 102 at least independent claims which do not recite limitation "fins". Applicant's arguments regarding deficiencies of the Nelson ('214) reference have not been found persuasive. Nelson is said to lack "an air duct comprising a housing, with the air duct directing an air flow from an inlet port to an outlet port". This is the only argument given in the art rejection of the relevant claims. As explained in paragraphs 8-12

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of the first action, duct (24) is inside housing (12) as a duct/chamber, with inlets at fans (32) and outlets at openings (22). Such reads on the claim language. The claim language is broader than Applicant argues. The claims are therefore have been properly rejected. However since the new reference of Kitahara is believed to be closer to the invention disclosed in the instant reissue application, the Examiner did not re-present previous rejection based on Nelson ('214) patent.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 571-272-2047. The examiner can normally be reached on Monday-Friday, between 10:00 am and 6:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg can be reached on 571-272-2800, ext 35. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anatoly Vortman
Primary Examiner
Art Unit 2835

AV

